

WHAT WE CLAIM:

- 1 1. A storage system comprising:
 - 2 an interface unit connected to a computer;
 - 3 a first controller which processes a file operation;
 - 4 a second controller which processes the read/write of
 - 5 data for a storage; and
 - 6 an internal network which accesses said interface unit,
 - 7 said first controller and said second controller mutually,
 - 8 wherein said interface unit selects a transfer
 - 9 destination of a frame transmitted from said computer, from
 - 10 one of said first controller and said second controller,
 - 11 and transfers said frame through said internal network to
 - 12 the selected controller.
- 1 2. A storage system according to Claim 1,
 - 2 wherein said first controller executes the read/write
 - 3 of the data for said storage through said second controller,
 - 4 in case it receives said frame from said interface unit and
 - 5 executes the file operation designated by said frame.
- 1 3. A storage system according to Claim 2, further
 - 2 comprising a second interface unit connected to another
 - 3 storage,
 - 4 wherein said interface unit selects the transfer
 - 5 destination of said frame from said first controller, said
 - 6 second controller or said second interface unit.

1 4. A storage system according to Claim 3,
2 wherein said first controller executes the read/write
3 of the data for said another storage through said second
4 interface unit, in case it receives said frame from said
5 interface unit and executes the file operation designated
6 by said frame.

1 5. A storage system according to Claim 1, further
2 comprising a plurality of said first controllers,
3 wherein said interface unit selects a predetermined
4 first controller from said plurality of first controllers
5 and transmits said frame through said internal network to
6 said selected first controller, in case said frame is a frame
7 containing a command requesting a file operation.

1 6. A storage system according to Claim 5, wherein
2 said interface unit holds the information on the
3 corresponding relation between said plurality of first
4 controllers and an identifier contained in the frame
5 received from said computer, and decides the first
6 controller, to which said frame is to be transferred, on
7 the basis of said information when said frame is received.

1 7. A storage system according to Claim 1, wherein,
2 according to the instruction of said first controller
3 having received said frame, said interface unit and said
4 second controller transmit/receive the data on the
5 processing of said first controller through said internal
6 network.

- 1 8. A storage system according to Claim 4, wherein,
2 according to the instruction of said first controller
3 having received said frame, said interface unit and said
4 second interface unit transmit/receive the data on the
5 processing of said first controller through said internal
6 network.
- 1 9. A storage system according to Claim 6, wherein
2 said information contains the information indicating
3 that said plurality of first controllers correspond to one
4 port belonging to said interface unit for receiving said
5 frame.
- 1 10. A storage system according to Claim 1, further
2 comprising a plurality of said interface units, wherein
3 the frame received by said plurality of interface
4 units is transferred to said first controller.
- 1 11. A storage system according to Claim 9, further
2 comprising a management unit, wherein
3 said interface unit reconfigures the contents of
4 said information and changes the transfer destination of
5 said frame in accordance with the instruction of said
6 management unit.
- 1 12. A storage system according to Claim 11, further
2 comprising:
3 a plurality of said interface units; and
4 means which inherits the processing executed in said
5 interface unit to another of said interface units in

6 accordance with the instruction of said management unit.

1 13. A storage system according to Claim 12, wherein

2 the instruction of said management unit is made when
3 the failure of said interface unit is detected by each device
4 belonging to said storage, and

5 said management unit has the information of said
6 another interface unit inheriting the processing at the time
7 of a failure of said interface unit.

1 14. A storage system according to Claim 12, further
2 comprising:

3 a plurality of said first controllers; and

4 means which inherits the processing executed in said
5 first controller to another of said first controllers in
6 accordance with the instruction of said management unit.

1 15. A storage system according to Claim 14, wherein

2 the instruction of said management unit is made when
3 the failure of said first controller is detected by each
4 device belonging to said storage, and

5 said management unit has the information of said
6 another first controller inheriting the processing at the
7 time of a failure of said first controller.

1 16. A storage system according to Claim 4, wherein

2 said second controller controls said another storage
3 through said second interface unit.

1 17. A storage system according to Claim 1, wherein

2 said second controller has a cache memory and a disk

3 device.

1 18. A storage system comprising:

2 an interface unit connected to a computer;

3 a controller which processes a file operation;

4 a second interface unit which processes the read/write

5 of data for a storage; and

6 an internal network which accesses said interface unit,

7 said second interface unit and said controller mutually,

8 wherein said interface unit selects a transfer

9 destination of a frame transmitted from said computer, from

10 one of said controller and said second interface unit, and

11 transfers said frame through said internal network to the

12 selected controller or said second interface unit.